

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Koji HAGIYA

Title: FLUORINATING AGENT AND METHOD FOR
PRODUCING FLUORINE-CONTAINING COMPOUND
USING THE SAME

Appl. No.: Unassigned

International Filing Date: 12/21/2004

371(c) Date: Herewith

Examiner: Unassigned

Art Unit: Unassigned

Confirmation Number: Unassigned

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §1.56

Mail Stop PCT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Submitted herewith on Form PTO/SB/08 is a listing of documents known to Applicant in order to comply with Applicant's duty of disclosure pursuant to 37 CFR §1.56.

A copy of each non-U.S. patent document and each non-patent document is being submitted to comply with the provisions of 37 CFR §1.97 and §1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicant does not waive any rights to take any action which would be

appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

TIMING OF THE DISCLOSURE

The listed documents are being submitted in compliance with 37 CFR §1.97(b), within three (3) months of the date of entry of the national stage as set forth in 37 CFR §1.491.

RELEVANCE OF EACH DOCUMENT

Some of the documents listed on the attached PTO/SB/08 were cited as being relevant during the prosecution of the corresponding International application. A copy of the International Search Report is attached setting forth the portion of each document considered relevant by the examiner. An English-language counterpart of the foreign-language documents has been provided.

Applicant respectfully requests that each listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

Although Applicant believes that no fee is required for this Request, the Commissioner is hereby authorized to charge any additional fees which may be required for this Request to Deposit Account No. 19-0741.

Respectfully submitted,

Date June 20, 2006

By Michael D. Kaminski

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Attorney for Applicant
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Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT Date Submitted: June 20, 2006 <i>(use as many sheets as necessary)</i>				Complete if Known	
				Application Number	Unassigned
				Filing Date	Herewith
				First Named Inventor	Koji HAGIYA
				Group Art Unit	Unassigned
				Examiner Name	Unassigned
				Attorney Docket Number	023174-0166
Sheet	1	of	2		

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
	A1	2004/0144947	A1	Garayt et al.	07/29/2004	= WO 02/092608
	A2	4,780,559		Brown et al.	10/25/1988	= JP 61-161224
	A3	6,881,698	B2	Bonnet et al.	04/19/2005	= WO 01/081353

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number ⁴	Kind Code ⁵ (if known)				
	A4	JP	4-124146		Hokko Chem Ind Co., Ltd.	04/24/1992		Abs
	A5	JP	2002-348266		Mitsui Chem Inc	12/04/2002		Abs
	A6	JP	2003-335734		Mitsubishi Chem Corp.	11/28/2003		Abs
	A7	WO	03/076366	A2	Chemtech Research Incorporation	09/18/2003		

NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.			T ⁶
	A8	BADONE et al., "Use of Polyethylene Glycol in the Synthesis of Alkyl Fluorides from Alkyl Sulfonates", Synthesis, 1987, pgs. 920-921.			
	A9	BOSCH et al., "Tetrabutylammonium Bifluoride: A Versatile and Efficient Fluorinating Agent", Tetrahedron Letters, 1987, Vol. 28, No. 40, pgs. 4733-4736.			
	A10	BRAM et al., "Easy and Efficient Heterogeneous Nucleophilic Fluorination without Solvent", Synthetic Communications, 1988, Vol. 18, No. 14, pgs. 1661-1667.			
	A11	CLARK et al., "Calcium Fluoride-supported Alkali Metal Fluorides. New Reagents for Nucleophilic Fluorine Transfer Reactions", J. Chem. Soc., Chem. Commun., 1986, pgs. 791-793.			
	A12	COX et al., "Anhydrous Tetrabutylammonium Fluoride: A Mild but Highly Efficient Source of Nucleophilic Fluoride Ion", J. Org. Chem, 1984, Vol. 49, pgs. 3216-3219.			

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

10/583608

AP3 Rec'd PCI/PTO 20 JUN 2006

MODIFIED PTO/SB/08 (08-00)

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Substitute for form 1449B/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Application Number	Unassigned
		Filing Date	Herewith
		First Named Inventor	Koji HAGIYA
		Group Art Unit	Unassigned
		Examiner Name	Unassigned
Date Submitted: June 20, 2006		Attorney Docket Number	023174-0166
(use as many sheets as necessary)			
Sheet	2	of	2

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
	A13	CUOMO et al., "An Efficient and Convenient Synthesis of Fluoroformates and Carbamoyl Fluorides", J. Org. Chem., 1979, Vol. 44, No. 6, pgs. 1016-1017.	
	A14	DERMEIK et al., "Effect of Water on the Extraction and Reactions of Fluoride Anion by Quaternary Ammonium Phase-Transfer Catalysts", J. Org. Chem., 1985, Vol. 50, pgs. 879-882.	
	A15	FINGER et al., "Aromatic Fluorine Compounds. VII. Replacement of Aromatic -C1 and -NO ₂ Groups by -F ^{1,2} ", J. Am. Chem. Soc., 1956, Vol. 78, pgs. 6034-6039.	
	A16	HAGIWARA et al., "Acidic 1-ethyl-3-methylimidazolium fluoride: a new room temperature ionic liquid", Journal of Fluorine Chemistry, Vol. 99, 1999, pgs. 1-3.	
	A17	ICHIHARA et al., "The Combination of Potassium Fluoride and Calcium Fluoride: A Useful Heterogeneous Fluorinating Reagent", Chem. Commun., 1986, pgs. 793-794.	
	A18	ISHIKAWA et al., "Enhanced Effect of Spray-Dried Potassium Fluoride on Fluorination", Chemistry Letters, 1981, pgs. 761-764.	
	A19	SEKIYA et al., "Preparation of Aryl and Arenesulfonyl Fluorides from the Corresponding Chlorides Using Zinc Fluoride-Pyridine System", 1978, Bulletin of the Chemical Society of Japan, Vol. 51, No. 4, pgs. 1267-1268.	
	A20	SWATLOSKI et al., "Ionic liquids are not always green: hydrolysis of 1-butyl-3-methylimidazolium hexafluorophosphate", Green Chemistry, 2003, Vol. 5, pgs. 361-363.	
	A21	UE et al., "Ionic Liquids with Low Melting Points and Their Application to Double-Layer Capacitor Electrolytes", Electrochemical and Solid-State Letters, Vol. 5, No. 6, pgs. A119-A121.	

Examiner Signature		Date Considered	
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